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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,661	03/19/2001	Yuji Fujiwara	MTS-3242US	9405

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EXAMINER	
COUSO, JOSE L	

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2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/811,661	Applicant(s) FUJIWARA ET AL.	
	Examiner Jose L. Couso	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2001 and 09 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/10/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 7, 8, 10, 14 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimoda (U.S. Patent No. 5,440,345).

With regard to claims 1 and 8, Shimoda ('345) describes encoding means of dividing a luminescence signal and color-difference signals of image signal into macro blocks having a plurality of sub macro blocks (see figures 9 (a)-(d) and refer for example to column 10, lines 41-53) and encoding data of the macro blocks with use of any one of a plurality of compression modes of which compression rate is different from each other (refer for example to column 3, lines 30-40 and column 15, lines 45-59), wherein the total numbers of sub macro blocks in each macro block are the same for the use of all kinds of compression modes (see figures 10 (a)-(c), and refer for example to column 10, lines 53-68).

In regard to claims 3 and 10, Shimoda ('345) describes encoding means of dividing a luminescence signal and color-difference signals of image signal into unites of macro blocks having a plurality of sub macro blocks and encoding data of the macro block (see figures 9 (a)-(d) and refer for example to column 10, lines 41-53), placing means of placing encoded data into sync blocks each assigned a predetermined initial amount of codes (refer for example to column 20, line 62 through column 21, line 33), wherein the placing means arrange the assignment of the predetermined initial amount

of codes to each sub sync block in the sync blocks so that for the sub sync block of the color difference signal of red color is different from the sub sync block of the color difference signal of blue color (as clearly illustrated in figures 3, 9 (c) and 9 (d)).

With regard to claims 7 and 14, Shimoda ('345) describes rate converting means of switching a kind of rate conversion with band limitation applied to the image signals, in accordance with the type of the compression mode, wherein the encoding means equalizes the compression rates of the image signals subjected to rate-conversion, in all the compression modes (refer for example to column 16, lines 31-45).

With regard to claim 17, Shimoda ('345) describes (a) receiving the image frame (refer for example to column 10, lines 45-47); (b) selecting one of the first and second compression modes (refer for example to column 10, lines 47-59); (c) subsampling the image frame received in step (a) to generate blocks of pixels, in which a total number of blocks generated depends on the compression mode selected in step (b) (see figures 8, 9(a)-(d) and 10(a)-(c)); (d) forming multiple macro blocks from the generated blocks of step (c), in which each macro block includes a predetermined number of blocks, the number of blocks of the compression mode selected in step (b) being the same as the number of blocks of the other compression mode (see for example figure 7); and (e) compressing each macro block formed in step (d) (see for example figure 17, element 16).

As to claim 18, Shimoda ('345) describes compressing each macro block using an amount of code, the amount of code used for the compression mode selected in step

(b) being the same as the amount of code used for the other compression mode (refer for example to column 16, lines 31-34).

In regard to claim 19, Shimoda ('345) describes subsampling the image frame to generate blocks of luminescence pixels and blocks of color difference pixels (see for example figures 9(a)-(d)).

With regard to claim 20, Shimoda ('345) describes forming each macro block of luminescence blocks and color difference blocks and compressing each macro block includes using an amount of code for compressing a luminescence block for the amount of code used for compressing a luminescence block for the other compression mode (see for example figures 9(a)-(d) and refer for example to column 16, lines 31-34).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 4-5, 9, 11-12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda (U.S. Patent No. 5,440,345) in view of Shimoda et al. (U.S. Patent No. 5,734,783).

The arguments advanced in section 2 above, as to the applicability of Shimoda ('345), are incorporated herein.

Although Shimoda ('345) does not specifically describe wherein the ratio between sub macro blocks of the luminescence signal and sub macro blocks of the

color difference signals varies depending on the compression method, such a technique is well known and widely utilized in the prior art.

Shimoda ('783) discloses a variable length code recording/playback apparatus which describes wherein the ratio between sub macro blocks of the luminescence signal and sub macro blocks of the color difference signals varies depending on the compression method (see figures 36 and 37(a)-(e), refer for example to column 21, lines 8-35). Figures 37(a)-(e) clearly illustrate the varying of the ratio between sub macro blocks of the luminescence signal and sub macro blocks of the color difference signals varies depending on the compression method. The cited portion of the reference expands and put in perspective the cited figures.

Given the teachings of the two references and the same environment of operation, namely that of encoding image signals, one of ordinary skill in the art at the time the invention was made would have been led in an obvious fashion to provide for varying of the ratio between sub macro blocks of the luminescence signal and sub macro blocks of the color difference signals varies depending on the compression method as taught by Shimoda ('783) in the Shimoda ('345) system since both references essentially describe the same system. This is an engineering design, providing for increased encoding efficiency, which fails to patentably distinguish over the prior art absent some novel and unexpected result.

With regard to claims 4, 11 and 21, Shimoda ('783) describes wherein the assignment of the predetermined initial amount of codes to each sub sync block in the sync blocks is defined so that for the sub sync block of the color difference signal of red

color is greater than that for the sync sub block of the color difference signal of blue color (as illustrated in figure 37 (d)).

As to claims 5 and 12, Shimoda ('783) describes wherein the assignment of the predetermined initial amount of codes to each sub sync block in the sync blocks is defined so that for the sub sync block of the color difference signal of red color equals that for the sub sync block of the luminescence signal (as illustrated in figure 37 (c).

5. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda (U.S. Patent No. 5,440,345) in view of Yada et al. (U.S. Patent No. 5,870,145).

The arguments advanced in section 2 above, as to the applicability of Shimoda ('345), are incorporated herein.

Although Shimoda ('345) does not specifically describe the assignment of the predetermined initial amount of codes to each sub sync block in the sync blocks is defined so that the ratio thereof among sub sync block of the luminescence signal and the sub sync block of the color difference signal of red color and the sub sync block of the color difference signal of blue color is 5 : 5 : 4, such a technique is well known and widely utilized in the prior art.

Yada discloses an adaptive quantization of video based on target code length which describes the assignment of the predetermined initial amount of codes to each sub sync block in the sync blocks is defined so that the ratio thereof among sub sync block of the luminescence signal and the sub sync block of the color difference signal of red color and the sub sync block of the color difference signal of blue color is 5 : 5 : 4

(refer for example to column 8, lines 48-52). While Yada does not specifically state that he is using a 5:5:4 he explicitly states various alternative and even suggests that "is not limited to that described above", the 5:5:4 ratio would therefore be an obvious variant.

Given the teachings of the two references and the same environment of operation, namely that of embedding data in signals, one of ordinary skill in the art at the time the invention was made would have been led in an obvious fashion to provide for the assignment of the predetermined initial amount of codes to each sub sync block in the sync blocks is defined so that the ratio thereof among sub sync block of the luminescence signal and the sub sync block of the color difference signal of red color and the sub sync block of the color difference signal of blue color is 5 : 5 : 4 as taught by Yada in the Shimoda system since both systems are primarily concerned with the encoding of image signals. This is an engineering design, providing for increased processing efficiency, which fails to patentably distinguish over the prior art absent some novel and unexpected result.

6. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimoda (U.S. Patent No. 5,440,345) in view of Aravind et al. (U.S. Patent No. 5,214,507).

The arguments advanced in section 2 above, as to the applicability of Shimoda ('345), are incorporated herein.

Although Shimoda ('345) does not specifically describe a program for making a computer serve as the encoding means, such techniques are well known and widely utilized in the prior art.

Aravind discloses a video signal quantization for an MPEG like coding environment which describes a program for making a computer serve as the encoding means (refer for example to column 14, lines 38-54).

Given the teachings of the two references and the same environment of operation, namely that of encoding image signals, one of ordinary skill in the art at the time the invention was made would have been led in an obvious fashion to provide for a program for making a computer serve as the encoding means as taught by Aravind in the Shimoda ('345) system since both systems are primarily concerned with the encoding of image signals. This is an engineering design, providing for a program which is essentially inherent in the Shimoda ('345) system, which fails to patentably distinguish over the prior art absent some novel and unexpected result.

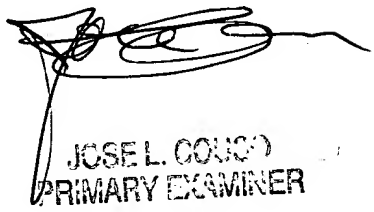
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takeuchi et al. disclose a system similar to applicant's claimed invention.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose L. Couso whose telephone number is (703) 305-4774. The examiner can normally be reached on Monday through Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8576.



Jlc
March 4, 2004